I590 Design Strategy (Fall, 2017)

Strategic Design for IUOS

Team 01

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Introduction

The STARS metrics and national reporting can act as a reputational boost for IU. More importantly, by targeting ways to bolster the STARS rating, we also create opportunity for creating/enhancing sustainability initiatives which aim to:

Increase visibility of IUOS

Currently there are a lot of initiatives already happening and valuable information on the IUOS website. Unfortunately, the initiatives and information is not as widely known as it should be, on-campus and off-campus.

Engage the IU campus

From speaking with your office, and from our research, it is clear that student engagement is a powerful tool for positively affecting change. Taking advantage of this is key to bringing success to any present and future initiatives.

Change behavior

From a psychology standpoint, changing behavior starts with changing a mindset. Helping people become more informed and rewarding sustainable behavior are two of many methods to doing this.

Strategic Design

Below is our strategic design explained in phases of how decisions were made and progressed:

1 - Success Metric

We started from the four strategic directions and funneled down by perceived level of **immediate positive impact**. From the Metrics direction, we used the various STARS categories to determine how to narrow down further. Specifically, we looked at areas where IU scored lower and found that operations was low. We also picked STARS because we felt it could complement the other success metrics well and show the overall health of IUOS' initiatives.

2 - Exploring Waste

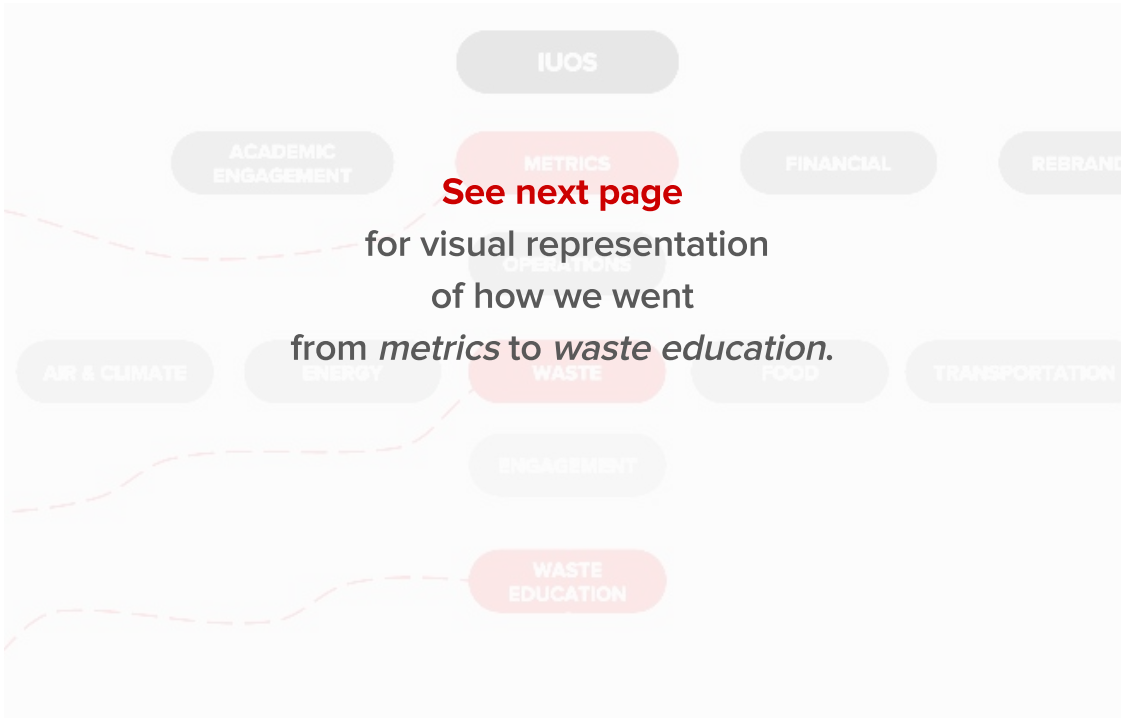
We decided to focus on the waste portion of the operations score because IU scored lower on this category and the size of the university. In exploring how we might improve the waste score we considered branding and engagement as avenues for getting people to lower their consumption. Ultimately we felt that **engaging faculty, staff and students** would have the greatest impact on reducing waste and improving the operations score.

3 - Augmenting Recyclemania

After deciding on a success metric and narrowing to waste reduction we came to three additional constraints for our design - increase visibility, engage the campus, and change waste behavior. Through research we found that students did not know about IUOS, however they did know about the IU Energy Challenge. We decided that a **competition challenge like the energy challenge** could work nicely to get students, faculty and staff involved in waste reduction.

Phase 1: Choosing a Success Metric

To begin brainstorming a direction, we used a **decision tree** to determine which of the four strategic directions we would focus on.



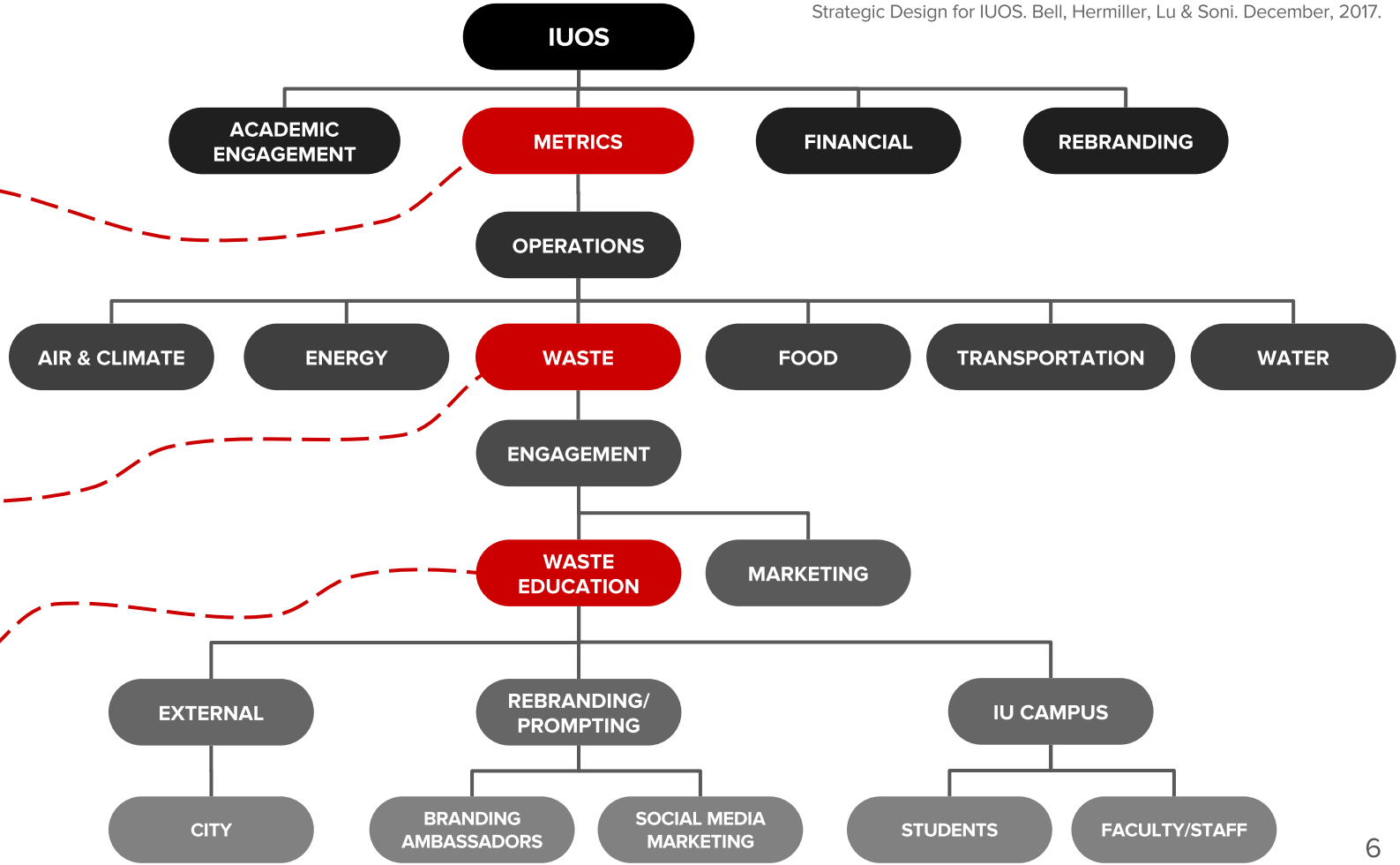
See next page
for visual representation
of how we went
from *metrics* to *waste education*.

Strategic Design for IUOS. Bell, Hermiller, Lu & Soni. December, 2017.

The STARS score holds weight that can be leveraged in the other 3 directions.

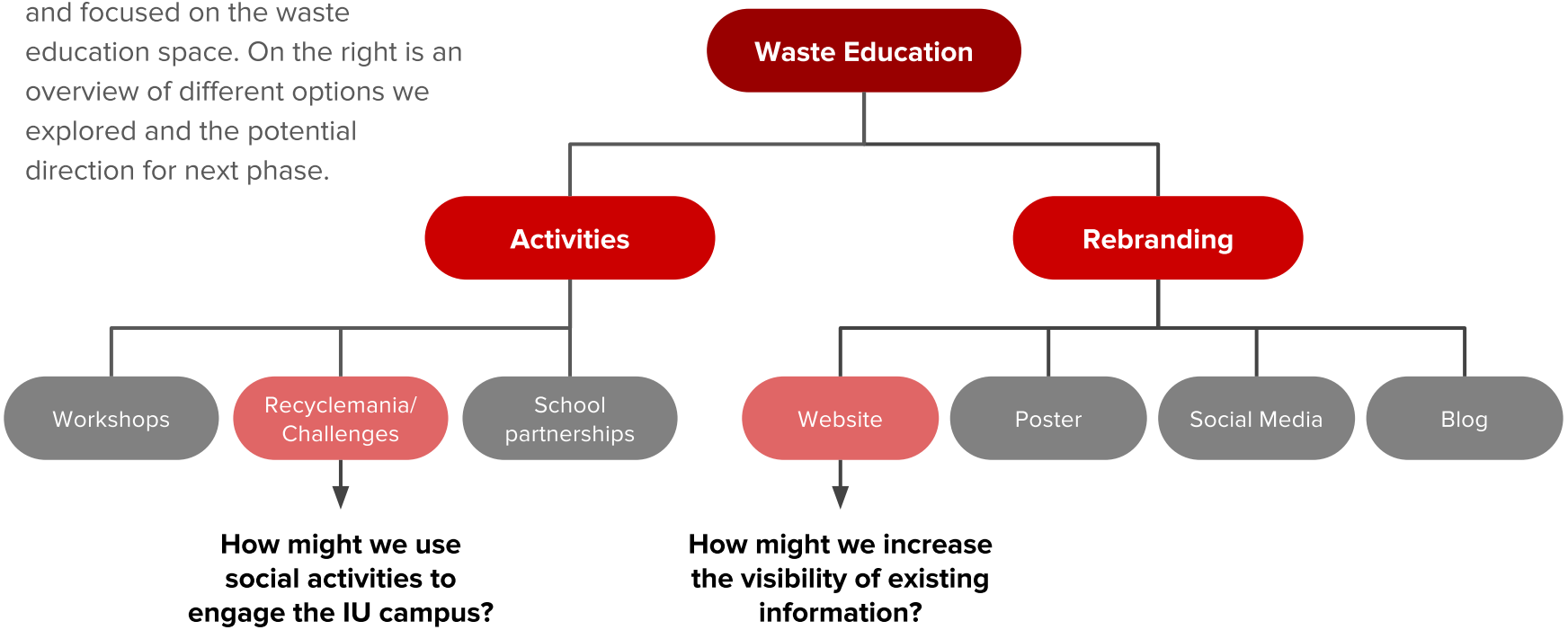
The STARS score implied that IU could improve in the area of waste.

Incorporates engagement and increased visibility for IUOS.



Phase 2: Exploring the Waste Education Space

For phase 2, we funneled down and focused on the waste education space. On the right is an overview of different options we explored and the potential direction for next phase.



Phase 3: Augmenting RecycleMania

With phase 3, we are hoping to replicate and leverage the competitive model of existing success both on campus and nationwide.

See following pages for a breakdown of our design, including an overview of the schoolwide competition, a more in-depth view of elements involved, and the project timeline.

Leveraging Existing Success

To be more specific, the existing model and initiative we are leveraging on is RecycleMania, which is a nationwide friendly competition among universities aiming to promote waste reduction activities.

On the other hand, we're also aiming to replicate the model of the Energy Challenge that has proven to be successful on the IU campus.

Predispositions

To reiterate and sum up the vision we've had in the previous two phases, below are the predispositions we had that led to our design.

1. Engaging more people at IU (faculty, staff, and students) can have the greatest impact for IUOS by changing behaviors associated with sustainability.
2. The STARS report accurately reflects what IU is performing well in and where there are areas of opportunity for a design concept.

Waste education through competition, promoting behavior change

Based on guidelines

School wide ranking system
Ranked by IUOS

Will be on IUOS website

Point system

- Total waste recycled per capita
- Reduced water use per capita
- Reduced food waste in cafe/food court
- Total diversion rate
- Signages & prompting to recycle
- Signages & prompting to reduce water use in restrooms
- Signages, prompting/ branding to reduce food waste

Appoint green school ambassador | **Conduct workshops** | **Internal design contest for labels**

School level initiatives; IUOS will provide guidelines and timeline to conduct these initiatives

Phase 3: Augmenting RecycleMania

Competition Between Schools

This is fundamentally a program which introduces competition amongst different schools based on their sensitivity to sustainability. A simple point system will ensure that each and every school is fairly compensated for their efforts.

Point System

The point system will take different initiatives into account, such as -

1. Waste recycling:
   How much waste do they collect in the recycle bins?
2. Water consumption:
   How much water are they able to save in their restrooms?
3. Diversion rate:
   How much waste are they able they divert from the landfill?
4. Visibility:
   Are they able to educate students about waste management through prompts and labels?

Weighted Ranking

Since we understand that these are different kinds of initiatives, they should be weighed differently. The actual recycling and waste efforts will have far more weight than visibility and branding initiatives.
Also, since we understand that different schools are of different sizes and have a different number of students, we are proposing that the point system considers ‘per capita’ or ‘per square foot’ to adjust points accordingly. This is similar to how it happens in the real world between different countries of different sizes and population.

Phase 3: Augmenting RecycleMania

Why would schools care about rankings?

The success of RecycleMania at other universities has proven that a positive competition between organizations would make significant contributions to said organization's waste management practices and performance, including raising awareness, generating support and reducing waste [1].

Based on previous post-competition results, over 70% of universities have reported a noticeable increase in recycling. We want to replicate the same model of motivation internally within IU.

[1] **Why Participate - RecycleMania.** (2017). Retrieved from https://recyclemania.org/participate/why-participate/

Project Timeline

Timeline guideline for RecycleMania

Will be provided to schools by IUOS

Nov 2018

Initiate internal design contest

Jan 2018

Schools select winning entries and start implementing label designs all over their buildings

Feb 2019

RecycleMania kicks off. Goals sent after discussion with schools

IUOS does first round of evaluation for signage and assigns points accordingly

First set of rankings published

March 2019

Schools monitor waste recycle and water consumption between Jan-March

IUOS does second round of evaluation and assigns points accordingly

Second set of rankings published

April 2019

Schools monitor waste recycle and water consumption between Jan-April

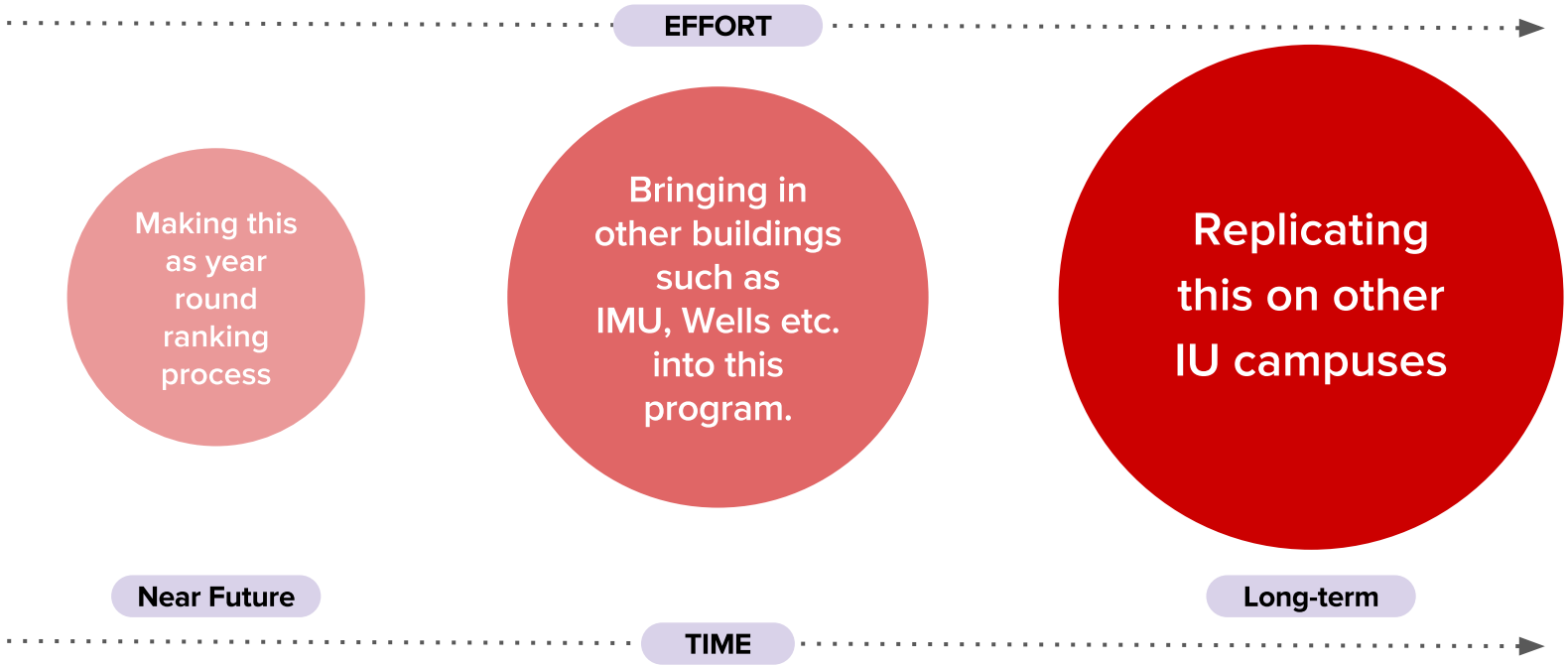
IUOS does third round of evaluation and assigns points accordingly

Final set of rankings published

Collective data sent to RecycleMania

Future Considerations

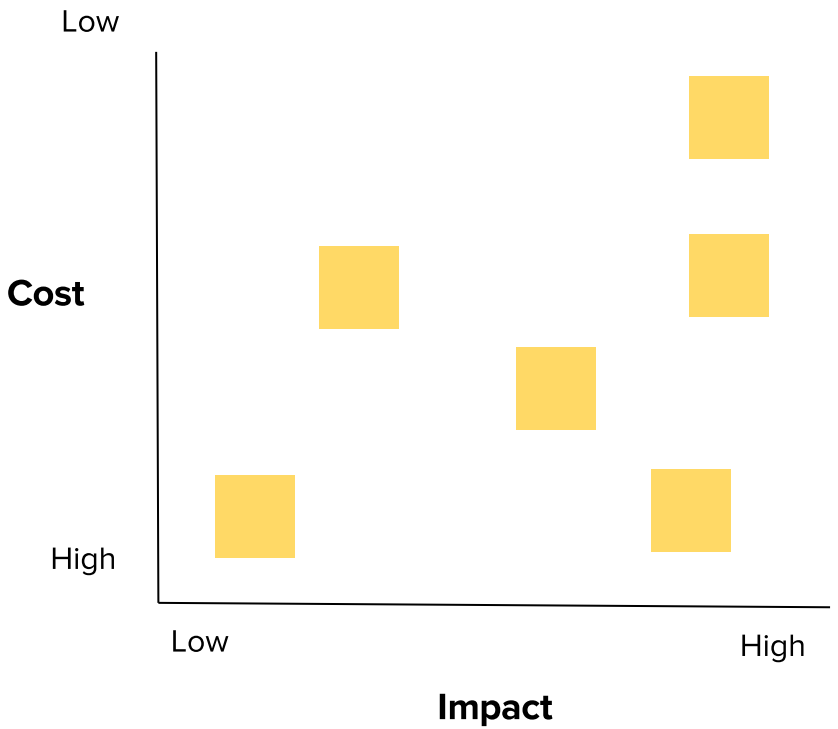
We also envisioned that in the future the program can be further spread throughout the campus, and potentially among IU overall.



Ideal Design

We felt that the main problem IUOS was coming to us with was an inability to differentiate between initiatives and prioritize what to work on next. Our ideal design would be to **create a toolkit that IUOS could use to facilitate decision making**, and to conduct a toolkit exercise with the office. (On the right is an example of how we envision the toolkit would be.)

We decided that this was not the best direction for a solution based on client feedback/expectations. Also, based on the strategic analysis, we felt that there were more tangible directions that IUOS could pursue in the short term. Specifically when we looked at Customer Segments and Value Proposition on the Business Model Canvas (see Appendix B4) we felt that there were specific ways to engage the IU campus and improve the STARS score.



Research & Insights

To provide more details on what supported and led to our decision-makings, below is an overview of the four areas we have looked into and gathered insights from throughout different phases of our project. The following pages will provide a more in-depth look on the research questions, activities, findings we had under each area.

Areas

- Sustainability at IU
- Prioritization
- Visibility of IUOS
- Waste Education Campaign

Insights

1. By improving an operational aspect of IU through **engagement** we can raise IU's STARS score with a more human-centered approach.
2. **Waste management** presents a unique opportunity to engage students, faculty, and staff at IU.
3. IUOS has a large amount of educational material currently available, but lacks focus or **visibility** with reaching out to students.
4. **Existing success** of the Energy Challenge within IU and RecycleMania nationwide provide a model and structure for us to leverage on.

Sustainability at IU

Research Questions

1. What are some areas IU have been performing well (or not)?
2. What are some areas that aligned with IU's strategic goals the most?

Research Activities

Analyzed data from STARS report and the Program Evaluation spreadsheet

Findings

1. Based on the latest STARS report of IU [2], IU has been performing well on the *Academics* category, but not so much on *Operations*, Air & Climate, Buildings, Energy, Food & Dining and Waste in particular.
2. Judging from the Program Evaluation sheet from the Director, the programs that contributed the most to IU's strategic goals generally are under academics, campus, and off-campus engagement.

[2] **Indiana University Bloomington | AASHE STARS**. (2017). Retrieved from https://stars.aashe.org/institutions/indiana-university-bloomington-in/report/2017-03-02

Prioritization

Research Questions

1. How do people assess and prioritize sustainability projects?
2. What are some factors that are usually taken into consideration other than the organization's goals?

Research Activities

Collected and examined different tools / framework / methodology that are utilized on prioritizing sustainability projects

Findings

Based on various prioritization tool and model [3] [4] [5], some significant factors are:

1. Cost: O&M spending, opportunity cost, risk factors
2. Relevance: to different stakeholder groups, such as administration, internal and external ones
3. Influence/Benefits/Opportunities on financial, environmental, social-economic and cultural development

[3] **The Sustainable Public Procurement Prioritisation Tool**. (2017). Retrieved from http://www.gov.scot/About/Performance/scotPerforms/partnerstories/SustainablePublicProcurementPrioritisationTool
[4] Whitehead, J. (2015). **Prioritising Sustainability Indicators and Initiatives using choice modelling**. Retrieved from http://www.nzdashboard.org.nz/prioritisation.html
[5] Anderson, K., Dan, M., Edwards, K. Mora, A. & Zhao, Y. (2016). **A Report for Cornell University Energy and Sustainability.** Retrieved from https://ecommons.cornell.edu/bitstream/handle/1813/45017/CU%20Sustainability%20FINAL.pdf

Visibility of IUOS

Research Questions

1. How do students perceive IUOS in general?
2. How are the waste education material available from IUOS reaching the students now?

Research Activities

Interviewed over 20 students and conducted survey with grad students in SICE

Perused IUOS's website & social media focusing on waste education related contents

Findings

1. The majority of students we interviewed and surveyed* have not heard of IUOS, and have not seen the waste education material available on IUOS's website.
2. However, the majority of the students we interviewed also voiced they have heard of IU's Energy Challenge and have participated in it.

*0/20 interviewed; 90% of students surveyed

Waste Education Campaign

Research Questions

1. How are other universities approaching waste education and awareness?
2. Are there any existing resources we can leverage on?

Research Activities

Collected case studies on waste management related campaign / competition / program happening nationwide and at different universities

Findings

1. The majority of the programs [6] [7] [8] that operate on a large scale are structured as competitions among different organizations or individuals.
2. The nationwide RecycleMania has proved to be successful with other university in reducing waste, raising awareness, and engaging students [9] [10].

[6] **RecycleMania.** (2017). Retrieved from https://recyclemania.org/
[7] **Game Day Challenge.** (2017). Retrieved from http://gamedaychallenge.org/
[8] **Sustainability Week 2016: Recycling Contest, Campus Celebration** (2016). Retrieved from http://sustainability.illinois.edu/sustainability-week-2016-recycling-contest-campus-celebration/
[9] **Why Participate - RecycleMania.** (2017). Retrieved from https://recyclemania.org/participate/why-participate/
[10] RecycleMania. (2017). **RecycleMania Tournament Report 2017.** Retrieved from https://recyclemania.org/wp-content/uploads/2017/09/2017-RecycleMania-Program-Report-FINAL.pdf

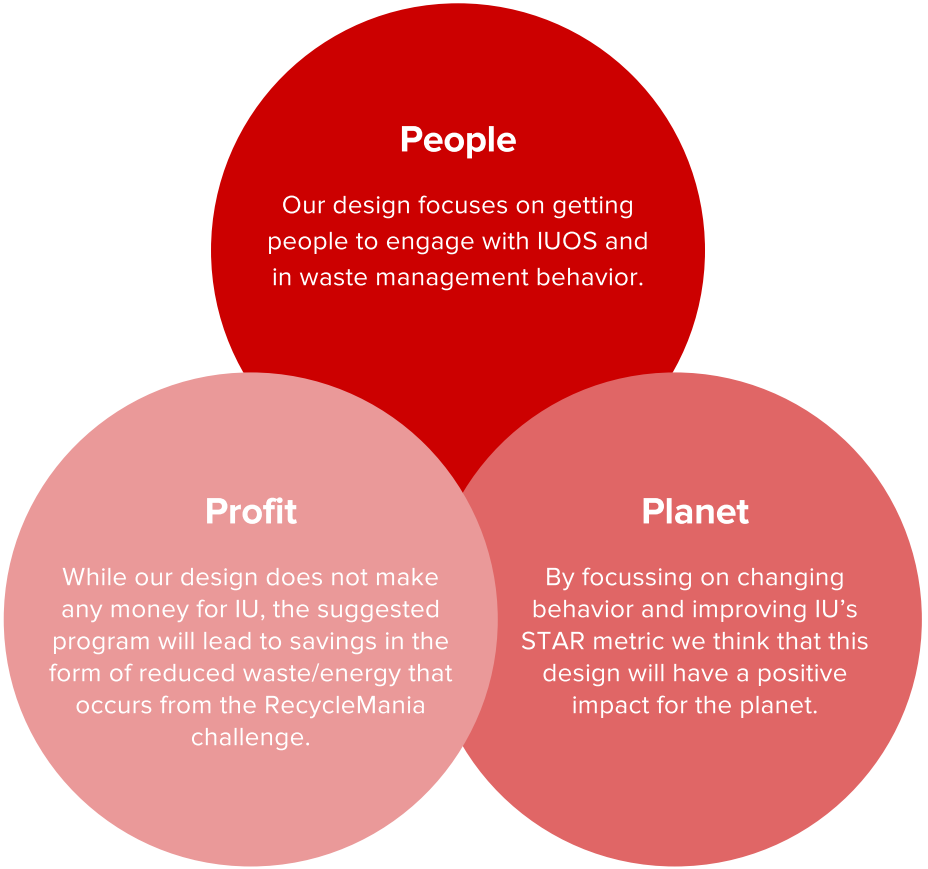
Conclusion

To sum up, our design started from choosing Metrics as the strategic direction to focusing on the problem space of waste education, with the goals of

(1) Increasing IUOS' visibility,
(2) Engaging the campus, and
(3) Changing behaviors in the long-term

in mind. On the right is an assessment of our design and vision based on the **triple bottom line** of *people*, *planet*, and *profit*.

We hope with our proposal, the competitive program can better assist IUOS in achieving a sustainable campus, and our decision-making process can provide some insights for future prioritization of sustainability projects.



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Specific Duties of Each Team Member

Nyah Bell

- Research
- Documentation
- Concept brainstorming

Patrick Hermiller

- Research
- Documentation
- Concept Brainstorming

Peggy Lu

- Research (analyzing metrics & collecting exemplars)
- Documentation
- Concept Brainstorming

Sanchit Soni

- Strategic Schemas
- Research on financial case for sustainability+SWOT
- Rationale+Explanation

SWOT

In order to gain a better understanding the IU campus landscape in terms of sustainability, we conducted a SWOT analysis of IUOS for the following strategic directions provided

1. The Financial Case for Sustainability
2. Academic Engagement and Off-campus
3. Fund Development, Rebranding
4. Focus on Metric and National Reporting.

The following pages provide summaries and breakdowns of each of these directions.

SWOT - The Financial Case for Sustainability

Summary

Overall the threat of reducing impacts to mere numbers to make a financial case and henceforth neglect qualitative benefits outweighs all other factors of Strength, Weakness and Opportunities. Making a financial case for sustainability would only make sense for a small set of quantitative initiatives such as energy.

Strengths

Would provide more buy-in from corporate donors and internal upper management as this is directly related to saving money.

Weakness

Focusing on business case would make stakeholders easily neglect other important environmental factors such as food waste, waste management and community engagement as long term benefits for these initiatives is difficult to assess purely in terms of money.

Opportunities

Working on business case can help establish direct monetary metrics such as establishing certain lighting systems will help save x amount of money, which provides a tangible argument for any initiative. This in particular can be applied to energy consumption related matters as energy is a very quantifiable medium.

Threats

Since making a business case will almost reduce any initiatives to mere numbers and data, it can completely neglect qualitative benefits of initiatives, such as psychological health, healthy food etc.

SWOT - Academic Engagement and Off-campus

Summary

- IUOS currently has a positive track record in the academic engagement area.
- Engagement is a powerful tool to use on and off campus to affect change.
- A challenge for engagement is turning the outcome into quantifiable data

Strengths

Being able to leverage the support of the Provost in academic and off-campus outreach could prove helpful in expanding either of those areas, or trying to put more into a specific program that has the greatest impact on campus/ in the Bloomington community.

Already having success stories which prove that certain sustainability causes are worth the budgeting.

Weakness

Having the Provost support could also be a constraint on the types of outreach and programs that can be put into place. These programs may not have the highest meaningful impact on changing sustainability long-term on the IU campus.

Being limited to academic student projects is likely to have low impact on overall campus sustainability.

These programs could be seen as just a marketing tool rather than being optimized as a real tool for change on campus.

Opportunities

Being able to use success stories in either area as marketing material to improve the presence of IU on the sustainability radar for prospective students and donors.

Partnerships with other schools (in and out of state) to make a commitment towards certain sustainability goals.

Academic projects which can gain external funding and have meaningful impact on the sustainability practices of the school.

Threats

Low or inconsistent funding sources.

Campus politics which limit the realization of meaningful sustainability practices or projects.

Lack of sufficient quantitative success metrics over time.

Limited human resources.

Low community engagement if off-campus projects are not seen as beneficial or feasible.

SWOT - Fund Development, Rebranding

Summary

- Providing a new brand for IUOS could help with getting more recognition on campus and improve chances for gifts
- Compared to the other success metrics Branding and Fund Development seem to be weaker as a primary option.

Strengths

Rebranding could help to gain control over sustainability messaging

Focussing on fund development can lead to greater resources coming into the office and bigger projects.

By focussing on The office of sustainability could potential he build out bigger projects that would be suitable for donors.

Weakness

Time consuming and difficult to obtain gifts. There is no guarantee that this strategy will work.

To have an effective rebranding there should be considerable work done this could potentially be resource heavy.

Opportunities

Plan out larger projects that could be specifically paired with a donor or donation.

Help spread the messaging for the office of sustainability you outside of just you and instead across the state as a whole

Threats

If we focus on fund development and are not able to get donations or it takes too much time/effort to obtain them we put IOUS at risk

SWOT - Focus on Metric and National Reporting

Summary

Metrics provide a clearer framework and benchmark that facilitate both communication and management, which can have a more immediate and direct impact on the other three directions. However, the foremost challenge will be on adapting the metrics to best serve IU's purpose and strategic goals, which will require further analysis of IU's sustainability landscape today.

Strengths

Focusing on metrics offers a consistent and comparable framework for the office to manage performance. The indicators also provide a clearer guidance on setting priorities and future policy-making.

It also facilitates communicating performance and conveying value-added messages to both internal and external stakeholders.

Weakness

Striving to meet all criterias and indicators may result in over-reporting and excessive regulation on both academia and operations.

The large amount of categories are rigid, and they may not all be compatible with IU's situation.

Opportunities

By focusing on publishing national reports reflecting IU's achievement on sustainability improves institution transparency, which goes along with the global trends on demanding higher education to be more transparent around outcomes and returns.

Having a higher ranking on the metrics helps IU stand a better chance on gathering funding, and attracting prospective faculty and students.

Threats

The power of different metrics are disputed. It may lead to further gap in understanding among different stakeholder groups.

Following indicators that do not align with local value might overshadow achievements that are meaningful to the community..

4Ps of Marketing

To better understand how IUOS can reach out the campus, we analyzed different touchpoint the office can leverage on marketing.

Price

Depends upon the selected initiative.

Price = Expenditure on resources HR

Product

On-campus Initiatives

Branding waste management education

Engagement for waste management education

Promotion

Branding through social media, campus ambassadors and selling merchandise

Online publications

Placement

On campus, digital presence

Competitive Analysis

The schools chosen (on next page) demonstrate very high quality sustainability practices, and hold a high STARS ranking. They work as inspiration for where IU can go, given time, continued engagement and possibly more resources.

We looked to these schools and asked:

- What are the platinum schools doing which could benefit IU?
- Are there noticeable differences these schools and IU, in terms of sustainability practices?

Insights

1. Consistent branding was very apparent amongst all the schools. Having a recognizable brand on campus is effective.
2. Comparing the amount of initiatives between IU and these schools shows no significant difference. There was no considerable difference when attempting to compare the quality or nature of the initiatives.
3. Structure of the sustainability offices may play a role but our research is inconclusive.

Competitive Analysis

University	Location	STARS Rating	Sample Programs	Structure
Harvard	Cambridge, Massachusetts	N/A	Green Labs Green Living Green Offices Green Revolving Fund Green Teams Student Grants	University project managers, the Capital Projects Review Committee, the University Construction Management Council, the Financial Deans and the Administrative Deans
Stanford	Stanford, California	2.1 Platinum	Cardinal Green programs such as the Cardinal Green Labs, Cardinal Green Events program, Conservation campaigns	Provost Committee: deans, institute leads and senior campus leadership Sustainability Working Group: policy and programs Sustainability Working Teams: initiatives recommendations
Purdue	West Lafayette, Indiana	2.0 Silver	Tailgate recycling team Green week Green building Native plantings Arboretum	Purdue University's Office of Campus Master Planning & Sustainability, students as assistants Student organizations on campus (Agriculture Student Council, Net Impact)
Colorado State	Fort Collins, Colorado	2.1 Platinum	EcoLeaders Zero-waste events Campus composting Solar PV arrays on campus	Truly joint effort of the entire campus
University of Maryland	College Park, Maryland	1.2 Gold	Green buildings Arboretum Botanical garden Farmers Market	N/A

Business Model Canvas

From our BMC (on next page) we came to a few additional strategic insights to consider while designing:

Insights

1. The STARS metric can be a way to gauge the impact projects and initiatives from a sustainability standpoint. An improved score could be leveraged to increase funding.
2. Engaging students and faculty in on campus sustainability can create a greater impact for IUOS.
3. IUOS has to operate within the culture of the university, depending on funding set out by the Provost and gifts for greater initiatives.

Business Model Canvas

KEY PARTNERS

Students
Faculty
Local businesses
Donors

KEY ACTIVITIES

Campus operations
Academic programs
Research programs
Outreach/Off campus engagement

KEY RESOURCES

Students
Faculty
Donors
Funding

VALUE PROPOSITIONS

Positive sustainability impact on campus and off campus

Lower cost of operations for sustainable buildings and waste

High STARS rating for prospective students and university reputation

CUSTOMER RELATIONSHIPS

Co-creation
Automated services
Communities

CHANNELS

IUOS website
IU events
Academic courses
Research programs
Energy Challenge

CUSTOMER SEGMENTS

IU Campus: students, faculty, staff

City of Bloomington: local residents

COST STRUCTURE

Initiatives/challenges/programs
Internship program and employees

REVENUE STREAMS

University Funding
Gifts